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Photomonitoring Protocol for the Upper Columbia Basin Network

Standard Operating Procedure (SOP) #5

Photography

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Note: This SOP describes the step-by-step procedures for operating photographic equipment for purposes of long-term trend monitoring of vegetation cover and demography, stream bank morphology, and for evaluating general landscape change.

Required reading:

Hall, F.C. 2002. Photo point monitoring handbook. U.S. Forest Service General Technical Report PNW-GTR-526. Parts A and B. 134 p.

Procedures:

1. Two cameras should be used at each camera station: a 35 mm single lens reflex (SLR) (see Hall 2002 for description) film camera with a 50 mm lens, and a 4.1 megapixel (or higher resolution) digital camera. Use back-and-white ISO 100 slide film. Use the zoom feature on the digital camera with caution. Make sure the focal length is recorded. Exactly match the focal length of previous photographs. Avoid zoom lenses whenever possible.

2. Prior to loading film into the camera, record the roll identification number. Mark digital camera flashcards with an identification number and record that as well. Include a photo identification board in the view of the photograph to embed identification information into each photograph. Digital cameras have accurate photo numbering, but the film advance dial on film cameras is usually too imprecise, and can lead to confusion and misidentification of photos after film development. A photo identification board will eliminate this problem.

3. Attach cameras to a tripod and adjust the height to optimize the topical objectives, or to match exactly the pre-established camera height. The camera height should not exceed 5 feet. Record the camera height in the appropriate data form.

4. Aim the camera so that the meter board is in the center of the viewfinder. Place the ring of the viewfinder (digital cameras don't have a ring) on the "1M" of the meter board and focus. Adjust the shutter speed and record this setting on the data form. Use a shutter speed that will allow for as large an f-stop setting as possible, providing for a greater depth of field. Use of a tripod will facilitate use of slower shutter speeds and larger f-stop settings. Adjust the f-stop setting according to the light meter and record the f-stop setting.